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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of

David Simpson, et al.

Serial No.: 08/948,328

Filed: October 10, 1997

: Group Art Unit: 2748

: Examiner: A. Hoosain

For: PERSONAL NETWORK NEWSCASTER WITH ENHANCED TEXT TO SPEECH
SYNTHESIS

TRANSMITTAL OF APPEAL BRIEF

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

Submitted herewith in triplicate is Appellant(s) Appeal Brief in support of the Notice of Appeal filed March 28, 2000. Please charge the Appeal Brief fee of \$300.00 to Deposit Account 500417.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

MCDERMOTT, WILL & EMERY

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PATENT

Docket No.: 50107-408

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of :
David Simpson, et al. :
Serial No.: 08/948,328 : Group Art Unit: 2748
Filed: October 10, 1997 : Examiner: A. Hoosain

For: PERSONAL NETWORK NEWSCASTER WITH ENHANCED TEXT TO SPEECH
SYNTHESIS

APPEAL BRIEF

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

This Brief is submitted pursuant to the appeal of the non-final rejection of claims 1 through 27, filed March 28, 2000. Claims 1 through 25 have been rejected three times; claims 26 and 27 have been twice rejected.

Appellant respectfully requests that an Appeal Conference be conducted.

REAL PARTY IN INTEREST

The real party in interest in this application is Bell Atlantic Network Services, Inc.

RELATED APPEALS AND INTERFERENCES

No other appeals or interferences are believed to affect or be affected by a decision in this appeal.

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STATUS OF CLAIMS

All pending claims 1 through 27 stand under final rejection.

STATUS OF AMENDMENTS

No Amendments have been filed after the last Office Action of record, dated December 9, 1999.

SUMMARY OF INVENTION

The present invention implements what can be characterized as a personalized message service for a plurality of subscribers. The service delivers to a subscriber particular information requested by the subscriber or messages identified for delivery to the subscriber. The sources provide a wide range of information and may comprise, for example, various types of news information sources such as API, UPI, Nexus, Dow Jones and the like. Information and message data originate as text data, but ultimately are converted to speech for the subscriber. The text messages may include E-mail, news-group postings and web page information. The subscriber's terminal may be a computer, such as a personal computer (PC) coupled to a data network, or any of various portable terminal implementations that utilize wireless communication. The subscriber, thus, is provided with customized information without the need for reading a display.

Fig. 1 exemplifies, in block diagram, system architecture of one embodiment in which the sources are illustrated as news sources. A service provider may operate one or more network computer servers 10. Server 10 comprises a computer system having one or more data communication interfaces 11 for obtaining information from a number of sources 20. Information text messages are classified and stored in a database 12. Various applications are

run on the server operating system. For example, an application program is run for controlling the physical elements of the interfaces 11 and for processing, classifying and storing the input text messages. An associated application program 13 develops, stores and maintains subscriber profile records, stored in database 14. Highly specific selection options allow each subscriber to establish a personalized profile to control selection of those items of interest. As new information items are accumulated in the various sources, they become available to the server. The program software classifies items received from the various sources into different subject matter categories.

Various types of subscriber terminals are illustrated. Each of the terminal device comprises a concatenative type speech synthesizer. This type of synthesizer uses a stored database vocabulary of recorded natural speech sound samples. The synthesizer concatenates coded speech segments together in a specified sequence and performs some signal processing to provide inflection or intonation and to thereby smooth transitions between segments, to produce an electrical speech waveform signal. The server 10, in the network, determines the appropriate stored sounds and the parameters of the playback of those sounds, needed to produce a high quality speech output corresponding to the received input text. The synthesizer in the terminal plays back the sounds selected by the server, and in the manner specified by the server, to reproduce the information from the original text message in a spoken language form.

The application 15 converts the text to the high level speech parameters (sound sample identifications and waveform control parameters) and a succeeding application 17 formats the speech parameters into an instruction set. A number of instruction sets and protocols may be used. The preferred implementation utilizes MIDI (Musical Instrument Digital Interface) commands. The receiving terminal, rather than synthesize music, interprets the received

commands that are then used to control the speech synthesizer in the terminal. The resulting instructions identify sequences of individual sounds for waveform synthesis and certain control parameters for each sound sample, which a synthesizer can use to ultimately synthesize a voice waveform to drive an audible output.

Reference is made to the specification for a more detailed description of the present invention. Claims 1, 12, 14, 19 and 27 are the sole independent claims. Claim 1 is presented below with elements read on drawing figures, as urged in MPEP 1206.

1. A system comprising:

a server (10, Fig. 1) coupled to a data communication network (21), said server being programmed to execute sequences of program instructions for:

(a) obtaining textual information (11) for forming messages for a plurality of subscribers,

(b) performing a significant portion of a text to speech process (15, Fig. 1; 51-67, Fig. 2) to convert the textual information of at least one of the messages to speech synthesizer instructions, and

(c) transmitting (19, Fig. 1; 69, Fig. 2) the speech synthesizer instructions over the data communication network; and

a subscriber terminal (30, 35, 40, Fig. 1) for receiving the speech synthesizer instructions via the data communication network, said subscriber terminal comprising a speech synthesizer (73, Fig. 2) for synthesizing a speech waveform signal representing the at least one message from the speech synthesizer instructions.

As stated in the section of the Manual noted above, the claims are not to be limited to this embodiment by such reading.

ISSUES

Whether claims 1 through 4, 7, 9, 11, 12, 14, 15, 18 through 20, 22, 23 and 25 are

unpatentable over U.S. Patent 5,572,643 to Judson (hereinafter "Judson") in view of a publication authored by Hertz (hereinafter "Hertz") under 35 USC § 103(a).

Whether claims 5, 6, 16, 17, 21 and 24 are unpatentable over Judson in view of Hertz and U.S. Patent 5,327,486 Wolff et al. (hereinafter "Wolff") under 35 USC § 103(a).

Whether claims 8, 10 and 13 are unpatentable over Judson in view of Hertz and U.S. Patent 5,530,852 to Meske, Jr. et al. (hereinafter "Meske") under 35 USC § 103(a).

Whether claims 26 and 27 have been rejected under 35 U. S. C. §103(a) as being unpatentable over Judson in view of Hertz and U.S. Patent 5,848,397 to Marsh et al. (hereinafter "Marsh").

GROUPING OF CLAIMS

The claims each contain specific individual recitations which, in context, are believed to warrant separate consideration for patentability.

ARGUMENT

1. Claims 1 through 4, 7, 9, 11, 12, 14, 15, 18 through 20, 22, 23 and 25 are not unpatentable over Judson in view of Hertz under 35 USC § 103(a).

It is well settled case law precedent that, in the application of a rejection under 35 U.S.C. §103, it is incumbent upon the Examiner to factually support a conclusion of obviousness. As stated in *Graham v. John Deere Co.* 383 U.S. 1, 13, 148 U.S.P.Q. 459, 465 (1966), obviousness under 35 U.S.C. §103 must be determined by considering (1) the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims in issue; and (3) resolving the level of ordinary skill in the pertinent art. The Examiner must provide a reason

why one having ordinary skill in the art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 227 USPQ 657 (Fed. Cir. 1985). *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983); *In re Warner*, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967). The Examiner should recognize that the fact that the prior art *could* be modified so as to result in the combination defined by the claims would not have made the modification obvious unless the prior art suggests the desirability of the modification. *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986). In the absence of such a prior art suggestion for modification of the references, the basis of the rejection is no more than inappropriate hindsight reconstruction using appellant's claims as a guide. *In re Warner*, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967).

Claims 1, 12, 14 and 19 are independent. Claim 1 expressly requires that the server obtain textual information to form messages for a plurality of subscribers, to perform a significant portion of a text to speech process to convert the textual information of at least one of the messages to speech synthesizer instructions, and to transmit the speech synthesizer instructions over the data communication network to a subscriber so that the instructions can be performed by a speech synthesizer at the subscriber terminal to complete the text to speech conversion. With this arrangement, the various functions involved in the text to speech conversion process can be efficiently divided between the server and the subscriber station; efficient both from the standpoint of division of functionality and of data transmission. See, for example, the description at page 22, *et seq.*, of the present specification. Independent claim 12 recites the same requirements in the context of a communication network computer.

Independent claim 14 calls for the terminal device to include a programmable central

processing unit for processing received data and to capture speech synthesizer instructions that are contained in the received data. The terminal memory stores a plurality of fundamental sound samples in digitized form, and a concatenative speech synthesizer is responsive to the instructions obtained in the received data, for processing samples from the memory in an order specified by the instructions and responsive to control parameters of a waveform signal synthesized from the processed samples in a manner specified in the instructions. Thus, while the terminal contains much of the stored data required for completion of text to speech conversion, the data received includes instructions, as well as the message text, necessary for that portion of the conversion process yet to be completed. Independent claim 19, in addition to containing these requirements, is more specific in its recitation of retrieving sound samples in the conversion processing operation. Method claim 19 also recites particulars relating to the use of subscriber profiles.

Judson is described in the final Office Action of September 17, 1999 as disclosing a subscriber terminal that receives aural instructions via the data communication network. The Office Action characterizes such instructions as speech synthesis instructions. The Office Action asserts that

Judson teaches that the server transmits a web page with aural html instructions and that some or all of the web page could be aural. Examiner believes that the aural html instructions are text to speech instructions provided by the server (Col. 5, lines 40-49 and Col. 6, lines 26-44). . . . [T]he aural instructions are in an information object. The only way this information object can be converted into speech is for some type of text to speech conversion process to be present. Since, Judson teaches that the information is output aurally, then this suggests that the user's computer has an inherent speech synthesizer (see also, Col. 8, lines 3-12).

Appellant submits that there is no basis for the Examiner's belief expressed in the above

quoted portion of the Office Action. Rather, such belief is wishful thinking on the part of the Examiner in which the claim language and application disclosure have been used, through inappropriate hindsight, to attribute characteristics to Judson that do not exist. It is submitted that Judson does not disclose or teach (1) conversion of text to speech, (2) speech synthesis, (3) transmission of speech synthesis instructions, nor does Judson (4) imply that the "subscriber terminal" inherently includes a speech synthesizer. These four claim requirements are not disclosed in the HTTP/HTML description in column 5, lines 40-49, nor the hypertext description at column 6, lines 26-44, nor the variations described at column 8, lines 3-12.

Judson describes placement of an information object within a comment tag of a web page. The web page is displayed at a user's monitor without the information object, the latter being stored in a temporary file. Upon activation by the user of a hypertext link in the displayed web page, the browser displays the information object during the period in which the browser obtains downloading of the hypertext document from a remote server. Judson states that the information object need not be merely a visual output, but that some or all parts "can be conveyed to the user aurally (via a multimedia speaker set, for example) as well as on the display screen." No detailed description has been provided of this "aural" conveyance.

Appellant submits that a person of ordinary skill in the art would not have found the teachings and suggestions attributed to Judson by the Examiner. A person of ordinary skill in the art would not have taken Judson's example of an information object used to produce a sound output from the user's speaker as a disclosure of speech synthesis, let alone a more specific text to speech synthesis application. That Judson teaches transmission of speech synthesis instructions over the data communication network is an even more remote conclusion.

Of record in this application is a declaration of David L. Stewart, filed under 37 CFR

1.132. Mr. Stewart's knowledge and experience in the technology area of the present invention are set forth in the declaration and establish him as at least a person of ordinary skill in this art. Both Appellant and Mr. Stewart assert that a person of ordinary skill in the art would have interpreted the Judson disclosure to teach that, for conveyance of the "aural" portion of the information object, a digitized audio signal waveform, possibly in compressed format, such as a *.wav file, would be included in the conveyed information object data.

In the subsequent Office Action of December 28, 1999, at page 3, the Examiner's description of Judson was changed. At (b), Judson is described as converting textual information messages to aural instructions, but not speech synthesizer instructions and, at (c), transmitting the aural instructions to the subscriber terminal. Column 6, lines 25-44 are relied upon for disclosing such subject matter. Appellant takes issue with this characterization, as nothing can be found in Judson that can be taken as conversion of text to "aural instructions." It is submitted that, while the HTML tags of Judson can deliver an aural content during the time in which the U.S. Patent and Trademark Office page is being retrieved, no explanation exists in either Judson or the Office Action as to why aural instructions are necessary or implied. The Office Action does not explain what the "aural instructions" perform nor why they are necessary if aural content is downloaded.

The Office Action now of record concedes that Judson does not disclose a text to speech process, nor speech synthesizer instructions, nor a terminal for receiving such instructions. Hertz is relied upon for teaching text to speech synthesis processing. The Hertz publication describes in detail a computer system for developing text-to-speech rules for any language. The user adapts these rules by specifying a set of features to define utterance symbols. User interaction occurs between the user and computer. Hertz does not disclose or suggest transmission of speech

synthesis instructions to a remote station that includes a speech synthesizer.

As noted above, independent claims 1 and 19 require that a significant amount of text-to-speech instructions be transmitted to a remote subscriber terminal which includes a speech synthesizer that completes the synthesis into appropriate waveforms. Independent claim 14 requires a terminal that receives speech synthesis instructions and uses a concatenative speech synthesizer to process memorized samples in response to the received instructions. It is respectfully urged that the Examiner has improperly applied a hindsight consideration of the present application disclosure to conclude that an artisan would have found it obvious to transmit speech synthesizer instructions in the Judson scheme in the manner required by the claims.

Rather than arriving at the subject matter of the claims, a person of ordinary skill in the art having considered all the references, would have concluded that the Judson arrangement would transmit text information as text data and transmit aural information simply as aural signal data. There would have been no reason to use the teachings of Hertz to provide text to speech synthesis in the Judson architecture, let alone downloading speech synthesis instructions to the terminal for use in the brief interval in which the web page is being accessed.

The dependent claims recite additional limitations that are not disclosed by Judson, such as the following. Claim 2, dependent from claim 1, and claims 22 and 23, dependent from claim 19, require transmitting the speech synthesizer instructions over a packet switched data network. Judson does not disclose transmission of speech synthesizer instructions over a packet switched data network. Claim 7, dependent from claim 1, recites a mail system for receiving mail messages for subscribers and supplying the mail messages as the textual information to the server for conversion and transmission to the subscriber terminal. Judson does not disclose conversion of mail messages and transmission of the converted messages to a subscriber terminal.

Claim 9, dependent from claim 1, further requires a unified message management platform for receiving mail messages for subscribers in a plurality of different formats including text format, and at least one other format, converting mail messages from the at least one other format to the text format, and supplying the text format mail messages to the server as the textual information for conversion and transmission to the subscriber terminal. This subject matter is not disclosed in Judson.

Claim 11, dependent from claim 1, further recites a memory storing a plurality of fundamental sound samples in digitized form, and a concatenative speech synthesizer responsive to the instructions, for processing samples from the memory in an order specified by the instructions and to control parameters of each of the processed samples in a manner specified in the instructions, to thereby generate the speech waveform signal. These specific speech synthesis requirements are not disclosed in Judson.

Claim 20, dependent from method claim 19, further requires computing linguistic parameter specifications from input text data, and converting the linguistic parameters into synthesizer control parameters. The synthesizer control parameters identify the samples in an order corresponding to the input text data and specify the manner of adjusting the process parameters for the identified samples. Judson is silent with respect to synthesizer control parameters.

In none of the above instances would Hertz have suggested modification of Judson to add the capability required by the dependent claims. As claims 1 through 4, 7, 9, 11, 12, 14, 15, 18 through 20, 22, 23 and 25 all contain the requirements discussed above that are not disclosed by Judson, nor suggested by the combined consideration of Judson and Hertz, it is respectfully submitted that the rejection of these claims under 35 U.S.C. §103 is untenable and should be

reversed.

2. Claims 5, 6, 16, 17, 21 and 24 are not unpatentable over Judson in view of Hertz and Wolff under 35 USC § 103(a).

It is well settled case law precedent that, in the application of a rejection under 35 U.S.C. §103, it is incumbent upon the Examiner to factually support a conclusion of obviousness. As stated in *Graham v. John Deere Co.* 383 U.S. 1, 13, 148 U.S.P.Q. 459, 465 (1966), obviousness under 35 U.S.C. §103 must be determined by considering (1) the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims in issue; and (3) resolving the level of ordinary skill in the pertinent art. The Examiner must provide a reason why one having ordinary skill in the art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 227 USPQ 657 (Fed. Cir. 1985). *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983); *In re Warner*, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967). The Examiner should recognize that the fact that the prior art *could* be modified so as to result in the combination defined by the claims would not have made the modification obvious unless the prior art suggests the desirability of the modification. *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986). In the absence of such a prior art suggestion for modification of the references, the basis of the rejection is no more than inappropriate hindsight reconstruction using appellant's claims as a guide. *In re Warner*, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967).

Claim 5, dependent indirectly from claim 1, additionally requires that the subscriber terminal comprise a programmable central processing unit coupled through a wireless network

data modem interface for communication via the data network. Claim 6, dependent from claim 5, additionally requires that the wireless network data modem comprise a cellular digital packet data (CDPD) modem. Claims 16 and 17, dependent indirectly from claim 14, recite similar requirements to claims 5 and 6. Claim 21, dependent from claim 19, additionally requires transmitting at least some of the sequences of instructions over a wireless data link to a plurality of the respective subscriber terminals. Claim 24, dependent from claim 19, requires that at least one of the respective subscriber terminals comprise a portable device with wireless data communication capability enabling wireless reception of sequences of the instructions.

In the rejection of claims 5, 6, 16, 17, 21 and 24, Wolff has been relied upon to conclude that it would have been obvious to add a "wireless capability" to the Judson arrangement. Appellant again submits that the Examiner has incorrectly arrived at a hindsight conclusion of obviousness. Wolff discloses managing telephone calls by using out-of-band, wireless, two-way signaling, messaging and alerting in order to screen, control, route and respond to incoming telephone calls and to communicate called party text messages in auditory form to the caller. Judson has no uses for such a system as the Judson arrangement is not directed to voice telephone calls but to accessing web information via the Internet. It is submitted that a person of ordinary skill in the art of Internet access would have found no suggestion for modifying the disclosed Judson architecture to include wireless transmission as proposed in the Office Action. It is respectfully submitted, therefore, that the rejection of claims 5, 6, 16, 17, 21 and 24 under 35 U.S.C. §103 is untenable and should be reversed.

3. Claims 8, 10 and 13 are not unpatentable over Judson in view of Hertz and Meske under 35 USC § 103(a).

It is well settled case law precedent that, in the application of a rejection under 35 U.S.C. §103, it is incumbent upon the Examiner to factually support a conclusion of obviousness. As stated in *Graham v. John Deere Co.* 383 U.S. 1, 13, 148 U.S.P.Q. 459, 465 (1966), obviousness under 35 U.S.C. §103 must be determined by considering (1) the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims in issue; and (3) resolving the level of ordinary skill in the pertinent art. The Examiner must provide a reason why one having ordinary skill in the art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 227 USPQ 657 (Fed. Cir. 1985). *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983); *In re Warner*, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967). The Examiner should recognize that the fact that the prior art *could* be modified so as to result in the combination defined by the claims would not have made the modification obvious unless the prior art suggests the desirability of the modification. *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986). In the absence of such a prior art suggestion for modification of the references, the basis of the rejection is no more than inappropriate hindsight reconstruction using appellant's claims as a guide. *In re Warner*, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967).

Claim 8, dependent from claim 7, further recites a news information server programmed to execute sequences of program instructions for storing profile information regarding news topics of interest to individual subscribers, receiving and storing news items from one or more sources, comparing the stored news items to the stored profile information to identify news items of interest to each individual subscriber, addressing mail messages containing text information representing the items of interest to subscribers mail boxes in the mail system, and transmitting

the mail messages containing text information representing the items of interest to the mail system. Dependent claims 10 and 13 contain similar subject matter requirements.

Meske has been relied upon in the Office Action to conclude that it would have been obvious to add a "news source capability" to the Judson arrangement. While Meske discloses a news source related to profiles for extracting articles, it is submitted that a person of ordinary skill in the art would have found no suggestion for combining such features in the Judson arrangement. Judson is directed to providing material to the user terminal during the brief time in which a selected web page is accessed. Downloading a complete article to be displayed (or aurally read) during such time period would not have made much sense without a further modification to Judson to permit an appropriate delay in completing access to the selected web page while the material in the article is read, stored or discarded upon consideration by the user. Such a modification of Judson would not have been suggested by the references as a significant restructuring of the arrangement would be required, without any apparent reason providing the Meske feature in the Judson system. In contrast, a delay in receiving the user selected web page would be undesirable. It is submitted, that if the artisan were to provide the Meske news source article feature at all in Judson, it would have been made available not in the limited period in which a web page is accessed, but rather as a separate information access.

Claims 8, 10 and 13, of course, are dependent either directly or indirectly from independent claims 1 or 12 and also require the text-to-speech synthesis requirements of the parent claims. Meske does not teach, nor has it been relied upon to teach, such subject matter. It is respectfully submitted, therefore, that the rejection of claims 8, 10 and 13 under 35 U.S.C. §103 is untenable and should be reversed.

4. Claims 26 and 27 are not unpatentable over Judson in view of Hertz and Marsh under 35 USC § 103(a).

It is well settled case law precedent that, in the application of a rejection under 35 U.S.C. §103, it is incumbent upon the Examiner to factually support a conclusion of obviousness. As stated in *Graham v. John Deere Co.* 383 U.S. 1, 13, 148 U.S.P.Q. 459, 465 (1966), obviousness under 35 U.S.C. §103 must be determined by considering (1) the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims in issue; and (3) resolving the level of ordinary skill in the pertinent art. The Examiner must provide a reason why one having ordinary skill in the art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 227 USPQ 657 (Fed. Cir. 1985). *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983); *In re Warner*, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967). The Examiner should recognize that the fact that the prior art *could* be modified so as to result in the combination defined by the claims would not have made the modification obvious unless the prior art suggests the desirability of the modification. *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986). In the absence of such a prior art suggestion for modification of the references, the basis of the rejection is no more than inappropriate hindsight reconstruction using appellant's claims as a guide. *In re Warner*, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967).

Claim 26 is dependent from claim 14 and further requires that the speech synthesizer instructions are in the form of MIDI (Musical Instrument Digital Interface) commands. Independent claim 27 is similar to claim 1 and also specifically recites that the speech synthesizer instructions are in the form of MIDI commands. The claim is recited in the context

of providing information items of interest identified in response to remote subscriber input.

The Office Action of record states, at paragraph 5 (page 7):

Judson teaches a communication terminal . . . wherein said aural instructions, but not speech synthesizer instructions, are not in the form of MIDI (Musical Instrument Digital Interface). Judson teaches that the aural instructions are output via a multimedia speaker and thereby suggests a MIDI interface (Col. 7, lines 38-43).

It is submitted that there is nothing in the referenced passage, nor anywhere else in Judson, that teaches aural instructions or suggests a MIDI interface.

Marsh has been relied upon in the Office Action for its teaching of MIDI capability.

According to the Examiner:

Since Judson and Marsh et al. are in analogous server activities, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to add the MIDI capability of Marsh et al.'s invention to the client capability of Judson's invention for a MIDI interface.

Appellant disagrees. Determination of whether or not references are in "analogous activities" can not substitute for the statutory criteria of obviousness. If references are not directed to analogous arts, there is strong implication that obviousness would not be concluded as there would have been no reason to consider both references in combination. However, if references are directed to "analogous activities" there is no *ipso facto* compelling reason to conclude that a combined consideration of their teachings suggests modification of the prior art to result in claimed subject matter. For example, the references can just as readily teach away hypothetical modifications. It is submitted that the Examiner, in order to establish obviousness under 35 U.S.C. §103, must do more than state that references which, in his opinion disclose various details, would have suggested the requirements of the claims merely because the

references "are in analogous server activities."

Appellant reiterates that Judson does not disclose transmitting speech synthesis instructions or MIDI instructions. When this reference is considered in combination with Hertz and Marsh, it is submitted that there is no suggestion for the invention recited in claims 26 and 27. It is contended, therefore, that the subject matter of claims 26 and 27 would not have been obvious under the provisions of 35 U.S.C. §103 and that the rejection should be reversed.

CONCLUSION

For the reasons advanced above, appellant respectfully urges that the rejections of claims 1 through 4, 7, 9, 11, 12, 14, 15, 18 through 20, 22, 23 and 25 as unpatentable over Judson in view of Hertz under 35 USC § 103(a), of claims 5, 6, 16, 17, 21 and 24 as unpatentable over Judson in view of Hertz and Wolff under 35 USC § 103(a), of claims 8, 10 and 13 as unpatentable over Judson in view of Hertz and to Meske under 35 USC § 103(a), and of claims 26 and 27 as being unpatentable over Judson in view of Hertz and Marsh under 35 USC § 103(a) are improper.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including

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extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.



Respectfully submitted,

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APPENDIX

1. A system comprising:

a server coupled to a data communication network, said server being programmed to execute sequences of program instructions for:

(a) obtaining textual information for forming messages for a plurality of subscribers,

5 (b) performing a significant portion of a text to speech process to convert the textual information of at least one of the messages to speech synthesizer instructions, and

(c) transmitting the speech synthesizer instructions over the data communication network; and

10 a subscriber terminal for receiving the speech synthesizer instructions via the data communication network, said subscriber terminal comprising a speech synthesizer for synthesizing a speech waveform signal representing the at least one message from the speech synthesizer instructions.

2. A system as in claim 1, wherein the server includes means for transmitting the speech synthesizer instructions over a packet switched data network.

3. A system as in claim 1, wherein the terminal further comprises a programmable central processing unit and an interface coupled to the programmable central processing unit for communication via the data network.

4. A system as in claim 3, wherein the interface comprises a modem.

5. A system as in claim 4, wherein the modem comprises a wireless network data modem.

6. A system as in claim 5, wherein the wireless network data modem comprises a cellular digital packet data (CDPD) modem.

7. A system as in claim 1, further comprising a mail system for receiving mail messages for subscribers and supplying the mail messages as the textual information to the server for conversion and transmission to the subscriber terminal.

8. A system as in claim 7, further comprising a news information server, said server being

programmed to execute sequences of program instructions for:

- storing profile information regarding news topics of interest to individual subscribers;
- receiving and storing news items from one or more sources;
- 5 comparing the stored news items to the stored profile information to identify news items of interest to each individual subscriber;
- addressing mail messages containing text information representing the items of interest to subscribers mail boxes in the mail system; and
- transmitting the mail messages containing text information representing the items of interest 10 to the mail system.

9. A system as in claim 1, further comprising a unified message management platform for receiving mail messages for subscribers in a plurality of different formats including text format, and at least one other format, converting mail messages from the at least one other format to the text format, and supplying the text format mail messages to the server as the textual information for 5 conversion and transmission to the subscriber terminal.

10. A system as in claim 1, wherein the server also is programmed to execute sequences of program instructions for:

- storing profile information regarding news topics of interest to individual subscribers;
- receiving and storing news items from one or more sources; and
- 5 comparing the stored news items to the stored profile information to identify news items of interest to each individual subscriber,
- wherein said textual information of at least one of the messages comprises one of the identified news items.

11. A system as in claim 1, wherein the speech synthesizer comprises:

- a memory storing a plurality of fundamental sound samples, in digitized form; and
- a concatenative speech synthesizer responsive to the instructions, for processing samples from the memory in an order specified by the instructions and to control parameters of each of the 5 processed samples in a manner specified in the instructions, to thereby generate the speech waveform signal.

12. A network server, comprising:

- a computer coupled to a data communication network, said computer being programmed to execute sequences of program instructions for:

- (a) obtaining textual information for messages for a plurality of subscribers;
- 5 (b) performing a significant portion of a text to speech process to convert the textual information of the messages to speech synthesizer instructions, each speech synthesizer instruction identifying a fundamental sound and at least one control parameter for controlling generation of a waveform corresponding to the fundamental sound; and
- (c) transmitting sequences of the speech synthesizer instructions, representing the messages,
- 10 over the data communication network to subscriber terminals for waveform generation in response thereto.

13. A network server as in claim 12, wherein the server also is programmed to execute sequences of program instructions for:

storing profile information regarding news topics of interest to individual subscribers; and receiving and storing news items from one or more sources;

5 comparing the stored news items to the stored profile information to identify news items of interest to each individual subscriber,

wherein said textual information of at least one of the messages comprises one of the identified news items.

14. A communication terminal device, comprising:

a data interface for receiving data from a communication network;

a programmable central processing unit for processing the received data to capture speech synthesizer instructions contained in the received data;

5 a memory storing a plurality of fundamental sound samples, in digitized form; and

a concatenative speech synthesizer responsive to the instructions, for processing samples from the memory in an order specified by the instructions and to control parameters of a waveform signal synthesized from the processed samples in a manner specified in the instructions.

15. A terminal as in claim 14, wherein the interface comprises a modem.

16. A terminal as in claim 15, wherein the modem comprises a wireless network data modem.

17. A terminal as in claim 16, wherein the wireless network data modem comprises a cellular digital packet data (CDPD) modem.

18. A terminal as in claim 14, further comprising:

a keyboard for supplying user inputs to the programmable central processing unit; and
a display for displaying information provided by the programmable central processing unit.

19. A method of providing personalized information services, comprising:

storing subscriber profiles relating to topics of interest to a plurality of individual subscribers;

receiving items of information from a plurality of sources;

5 comparing the items of information to the subscriber profiles to identify items of interest to particular subscribers;

converting textual information relating to at least some of the identified items of interest to sequences of speech synthesizer instructions;

transmitting each of the sequences of instructions to one or more terminals, each terminal
10 being utilized by a subscriber;

storing received sequences of instructions in respective subscriber terminals;

in response to one of the sequences of instructions, retrieving sound samples from memory in a subscriber terminal in an order specified by the one sequence of instructions and adjusting process parameters for the retrieved samples in a manner specified by the one sequence of
15 instructions, to thereby generate a speech waveform signal representative of one of the identified items of interest.

20. A method as in claim 19, wherein the step of converting textual information relating to at least some of the identified items of interest to sequences of speech synthesizer instructions comprises:

computing linguistic parameter specifications from input text data;

5 converting the linguistic parameters into synthesizer control parameters, said synthesizer control parameters identifying the samples in an order corresponding to the input text data and specifying the manner of adjusting the process parameters for the identified samples.

21. A method as in claim 19, wherein the step of transmitting comprises transmitting at least some of the sequences of instructions over a wireless data link to a plurality of the respective subscriber terminals.

22. A method as in claim 19, wherein the step of transmitting comprises transmitting at least some of the sequences of instructions via a packet switched data network.

23. A method as in claim 22, wherein the public switched packet data network comprises the Internet.

24. A method as in claim 19, wherein at least one of the respective subscriber terminals comprises a portable device with wireless data communication capability enabling wireless reception of sequences of the instructions.

25. A method as in claim 19, wherein at least one of the respective subscriber terminals comprises a personal computer for coupling to a public data network enabling reception of sequences of the instructions via the public data network.

26. A communication terminal as recited in claim 14, wherein said speech synthesizer instructions are in the form of MIDI (Musical Instrument Digital Interface) commands.

27. A system comprising:

a server coupled to a data communication network, said server being programmed to execute sequences of program instructions for:

(a) obtaining textual information for forming messages for a plurality of subscribers,

(b) performing a significant portion of a text to speech process to convert the textual information of at least one of the messages to speech synthesizer instructions in the form of MIDI (Musical Instrument Digital Interface) commands, and

(c) transmitting the speech synthesizer instructions over the data communication network; and

10 a subscriber terminal for receiving the speech synthesizer instructions via the data communication network, said subscriber terminal comprising a speech synthesizer for synthesizing a speech waveform signal representing the at least one message from the speech synthesizer instructions.